

ABSTRACT

The surface inspection apparatus comprises a light source section for emitting a first luminous flux and a second luminous flux; a first irradiation optical system in which the first luminous flux is irradiated on the surface of an inspected object at a first irradiation angle; a second irradiation optical system in which the second luminous flux is irradiated on the surface of an inspected object at a second irradiation angle different from the first irradiation angle; a displacement section for relatively displacing an inspected object and an irradiation luminous flux of the irradiation optical system; a light receiving optical system for receiving scattered light of the first luminous flux irradiated by the first irradiation optical system and produced from an inspection object on the surface of an inspected object and scattered light of the second luminous flux irradiated by the second irradiation optical system and produced from an inspection object on the surface of an inspected object; a first light receiving section for converting scattered light of the first luminous flux received by the light receiving optical system into a first light receiving signal; a second light receiving section for converting scattered light of the second luminous flux received by the light receiving optical system into a second light receiving signal; and a signal forming section for forming a measuring signal on the basis of the first light receiving signal and the second light receiving signal. The first light receiving section and the second light receiving section form a first light receiving signal and a second light receiving signal which are different in sensitivity or dynamic range from each other, and synthesizes the first light receiving signal and the second light receiving signal which are different in sensitivity or dynamic range from each other to form a measuring signal.